CLAIMS

1. A dough mixer for the production of dough for baked goods that is equipped with a metering device for flour-like ingredients, of the kind with closed housing with horizontal axis in which a kneading element operates with rotational axis that is coaxial or parallel to the housing axis, characterized in that chambers of the dough mixer inside a housing (1) having two inner, essentially circular, juxtaposed, coaxial and separated surfaces (1e, 1f) between which two casing surface sections (1a) extend which run in an arc along the same casing line and change in the upper and lower region into a flat surface section (1b, 1c), of which each is at least partially formed by the surface of a sliding (2c, 3c) blade (2,3) in its closed position; that along the perimeter on both circular surfaces (1e, 1f) a cross piece (1g) with large rounding-off radius is provided to the casing surface sections (1a) and to the level surface sections (1c, 1b), and that the circular surface (1f) which is across from the flat circular surface (1e) from which the drive shaft (12a) extends for the kneading element (4, 4c, 4d) has a slight conical or domed form that projects out into the inner chamber, coaxially to the rotational axis of the kneading element (4, 4c, 4d).

2. The dough mixer with metering device according to Claim 1, characterized in that the circular surface (1f) in the chamber of the dough mixer, which from the circular surface (1e) from which the drive shaft (12a) extends for the kneading element (4, 4c, 4d), has a distinctive conical, nose cone-shaped, or cylindrical form with hemispherical end that is coaxial or parallel to the rotational axis of the kneading element (4, 4c, 4d).

3. The dough mixer with metering device according to Claim 1, characterized in that the circular surface (1f) which from the circular surface (1e) from which the drive shaft (12a) extends for the kneading element (4, 4c, 4d) has one or more holes (13) for the supply of liquid ingredients and that the hole or holes (13) are provided in a central region of the circular surface (1f), which is within the circular track of the ends of the kneading element (4, 4c, 4d).

4. The dough mixer with metering device according to Claims 1 through 3, characterized in that the chambers of the dough mixer together with the kneading element (4, 4c, 4d) are occasionally subjected to moving hot air which is introduced through a separate hole or nozzle or via one or more holes (13) used to charge liquid ingredients and which exits through a discharging opening (3a, 1d), and that this air is generated by the drive motor (12) of the dough mixer or from a pneumatic system and is heated prior to entry in order to sterilize the chamber and the kneading element, and loosens any bits of dough or leftover ingredients, and transports them by means of the exiting stream of air.

5. The dough mixer with metering device according to Claim 1, characterized in that the kneading element of the dough mixer comprises an arm (4), which extends radially from the end of the drive shaft (12a) and from the free end of which arm is attached a fixed pin (4c) with an axis running parallel to the rotational axis of the arm, on which is placed a cylindrical sleeve (4d) by means of an axial recessed hole and that both terminal regions of the sleeve (4d) are rounded-off, round-ended, or nose cone-shaped.

6. The dough mixer with metering device according to Claim 1 and partially according to Claim 2, characterized in that the kneading element comprises two or more arms (4) which radially are at some distance from the end of the drive shaft (12a), possibly at various angles to each other and on each end of which is attached a fixed pin (4c) with a longitudinal axis running parallel to the rotational axis of the arms (4) on which sleeves are placed of possibly different outside diameter and/or different forms, and that the axes of the individual pins (4c) on each of the arms (4) are not equidistant to the common rotational axis.

7. The dough mixer with metering device according to the Claims from 1 to 6, characterized in that the wall with its front side circular surface (1f) of the chamber of the dough mixer, which stands opposite to the circular surface

(1e) from which the drive shaft (12a) for the kneading element (4, 4c, 4d) extends, is replaceable with walls that are suitable for changing the distance between both of the front side surfaces (1e, 1f) and that depending on this change the sleeves (4d) can also be substituted.

8. The dough mixture with metering device according to the protective Claim 1, characterized in that the metering device mounted on the dough mixer with vertical axis contains a dust region for the flour (14) in the upper region, and a metering mechanism within the same cylindrical container (5, 5a, 5b) in the lower region, and the stirring elements (7b) for the dust region of the flour, together with the stirring elements (7a) of the metering mechanism are activated by a shaft (8) that is shared coaxially with the container axis and that this shaft, in addition, is connected with a distribution cone (7) for the flour for the metering region and with a metering disk (9) with metering holes (9a) on the rim that are equidistant both from one another and to the rotational axis.

9. The dough mixer with metering device according to Claims 1 and 8, characterized in that in the container of the metering device, which the dust region for the flour (14) relating to the metering region is horizontally subdivided by an annular, funnel-like partition (6) through which the central opening of the upper part of the distribution cone (7) extends in order to form an annular duct (6c) for the flour (14), and that at least one stirring element (7b) operates which extends radially from the distribution cone (7) near the upper surface of the partition (6).

10. The dough mixer with metering device according to Claims 1, 8 and 9, characterized in that the metering mechanism in the metering device, which comprises a metering disk (9) with continuous metering holes (9a) driven (8a) by the same shaft (8) that drives the distribution cone (7) and the stirring elements (7a, 7b), that this rotatable metering disk is positioned between the fixed, level bottom plate (5b) of the container of the metering device and an annular, fixed sieve (10), and that the bottom plate (5b) forms the lower level and the sieve (10) covers the upper ring region of the

metering disk (9) free of the distribution cone (7) and that the bottom plate (5b), in the region of the track of the metering holes (9a) of the metering disk (9), has a continuous outflow opening (5e).

11. The dough mixer with metering device according to Claims 1, 8, 9, 10, characterized in that the sieve (10) within the metering device, which covers the metering disk (9) at least in the track region, in the outflow region which is defined by the outflow hole (5e) on the bottom plate (5b), has no ducts (10a) for the flour, and that at least one stirring element at some distance from the distribution cone (7), while its rotation (8a) passes close to the surface of the sieve.

12. The dough mixer and metering device according to the Claims 1 through 11, characterized in that both of the devices can also function independently of each other, and the dough mixer with a known metering device or the metering device can be coupled with a known kneading device.